

# HEARING AID RESEARCH LABORATORY

## Connected Speech Test (CST)

Audiovisual version



**SUPPLEMENT TO THE DVD**



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## INTRODUCTION

The Connected Speech Test (CST) provides objective quantification of the intelligibility of sets of sentences about different topics. The test was recorded with both auditory and visual stimuli. This DVD was produced from the original video laser disk. The video image shows a close-up view of the talker's head and shoulders. As a measure of everyday speech, the CST has high content validity (conversationally produced connected speech), good sensitivity, and several equivalent forms. The user is strongly encouraged to consult the articles, cited at the end of this introduction, about the development and administration of the test and reliability of the data from normal-hearing and hearing-impaired listeners.

The DVD contents include:

- 3 calibration signals
- 8 Practice passages
- 16 Learning Passages
- 8 audio-visually equivalent sets of six passages each.

All passages are recorded with the talker on the right channel and a competing babble on the left channel. The talker is a female who produces speech of average intelligibility (Cox, Alexander, and Gilmore, JASA, 1987). The multi-talker babble can be adjusted to simulate the signal to babble ratio (SBR) conditions encountered in everyday listening situations.

### Audio calibration signals

Three types of calibration signals are provided:

- the CST-shaped Noises are the calibration signals produced for the audio CD. These signals were not on the original laser disk. The calibration noises were created for the audio CD by filtering random noise so that the long-term level in each 1/3-octave band is essentially the same as that in the corresponding test materials. On the right channel, the calibration noise has the same 1/3-octave band spectrum and level as the talker (the RMS difference between talker and calibration noise in the 1/3-octave bands from 200 Hz to 10 kHz is 0.66 dB). On the left channel, the calibration noise has the same 1/3-octave band spectrum and level as the multi-talker babble (the RMS difference between babble and calibration noise in the 1/3-octave bands from 200 Hz to 10 kHz is 0.53 dB). Note that this relationship between test materials and calibration noise was computed over the entire corpus of test materials. For any individual sentence or passage, there will probably be differences between the spectrum of the calibration noise and that of the test materials. If the calibration noises are set so that the audiometer VU meter readings are -5 dB (left CD channel) and -4 dB (right CD channel), both the test passages and the babble will have peak meter excursions near 0 dB on the VU meter.

- the Uncorrelated CST Babble contains several minutes of CST babble on both channels. Material on the left channel is uncorrelated with that on the right channel. Excerpts from this may be used (using a second DVD and player) if it is desired to present uncorrelated babble from additional loudspeakers as a competing message. These signals are also available on the audio CD.
- the Speech-shaped Noise approximates the long-term spectrum of the talker and the competing babble. These noise signals were part of the original laser video disk. If the calibration noises are set to VU meter readings of -5 dB on both channels, both the speech passages and the babble will have peak readings near -3 dB on the VU meter. Note that, on the right channel, the long-term overall level of this calibration noise is one dB higher than the mean long-term overall level of the test passages. On the left channel the long-term overall level of this calibration noise is 3 dB lower than the mean long-term overall level of the competing babble associated with the test passages.

*Note: Due to a programming error, the speech-shaped noise is not accessed when the built-in menu option for “speech-shaped noise” is selected. Instead, the CST-shaped noises are played. The speech-shaped noise is not available at this time.*

### **Test passages:**

Though the 48 test passages are equally intelligible, on average, for normal-hearing listeners, they are not necessarily equivalent for hearing-impaired listeners. There is additional variation with the introduction of visual clues. Thus, the test passages have been arranged on this disk into 8 sets of 6 passages each. The 8 sets of passages are equivalent on average for hearing-impaired listener-viewers. Scores should be averaged across the 6 passages of a set to produce the score for a particular listening condition when the test is presented audio-visually.

Each passage of speech comprises 9 or 10 sentences about a familiar topic. The listener should be informed of the passage topic prior to presentation. The video presents the text topic word preceding the passage. It is recommended that the user pause the DVD while the topic word is showing so that the listener can take note of it. Following the topic word, the passage should be played one sentence at a time. The passage score is based on the proportion of 25 scoring words correctly repeated.

The Test Passages were recorded at a conversational rate, with natural timing between sentences. Manual presentation of this material requires that the user pause the DVD presentation after each sentence of a passage to allow the listener to repeat each sentence, and for the user to score the correct words. A complete script of all passages and their scoring words follows. This script can be printed or copied for use in manual scoring.

The 8 Practice Passages are similar in structure and content to the test passages but have slightly poorer reliability. When the practice passage is novel to the listener, the scores should be reasonably close to performance on the test passages. Practice Passages may be used to select an appropriate SBR for testing or to acclimate the listener to the task.

Note that there is a period of rapid learning when listeners are first exposed to the CST task and whenever the SBR is changed. Hence, it is advisable to administer Practice passages before test data are collected. Also, reliability is improved if one of the four Practice pairs is presented each time test conditions are changed.

The 16 Learning Passages are also similar in structure to the test and practice passages but with relatively poorer reliability. They are used primarily to familiarize the listener with the CST task and the characteristics of the talker. Scores on these passages are not necessarily predictive of the listener's performance on the test passages. Note that the final sentence of the last Learning Passage ("Kidney") was not recorded on the video laser disk due to space limitations and, therefore, does not appear on this DVD.

#### **Pointers for test administration:**

- Because of the learning effect, repeated presentation of a sentence is usually not advisable. A sentence can be replayed if something happens during the sentence presentation which would prevent the listener from hearing the sentence. Some common examples of this would be if the listener sneezes or coughs while the sentence plays, or the listener starts talking as the sentence plays.
- Reliability of the test is improved if a practice passage is administered each time the test conditions are changed. This would include changes in the SBR or presentation level; aided vs. unaided conditions; and changes in hearing aid settings.
- A listener tends to remember test sentences. To minimize memory effects, allow 2-3 months to elapse before administering a test passage a second time.

#### **Please refer to these articles for further and more detailed information about the CST and its development:**

- Cox RM, Alexander GC, and Gilmore C. "Development of the Connected Speech Test (CST)." *Ear and Hearing*, 8(suppl): 11 9S-1 26S (1987).
- Cox RM, Alexander GC, Gilmore C. and Pusakulich KM. "Use of the Connected Speech Test (CST) with Hearing-impaired Listeners". *Ear and Hearing*, 9(4), 1 8-207 (1988).
- Cox RM, Alexander GC, Gilmore C. and Pusakulich KM. "The Connected Speech Test Version 3: Audiovisual Administration". *Ear and Hearing*, 10(1), 29-32 (1989).
- Cox RM, Alexander GC, and Gilmore C. "Intelligibility of average talkers in typical listening environments". *JASA*, 81:1598-1608 (1987).

# TEXT FOR CONNECTED SPEECH TEST PASSAGES

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## Text for the **CONNECTED SPEECH TEST** (scoring words are capitalized)

### *Test Passage Pair 1 (Window/Glove)*

#### **Psg: 1-WINDOW**

Windows **PROVIDE LIGHT** and air to **ROOMS**.  
Windows were **ONCE COVERED** with **CRUDE SHUTTERS**.  
Later, oiled **PAPER** was **USED** for windowpanes.  
**GLASS** windows **FIRST** appeared in ancient Rome.  
**COLORED** glass was used in European **WINDOWS**.  
**SOME CHURCHES** were **FAMOUS** for their **BEAUTIFUL** windows.  
These windows **DISPLAYED PICTURES** from the **BIBLE**.  
**PIECES** of glass were **HELD** together by lead.  
**SUCH** windows **MAY** be seen in French cathedrals.  
English churches also contain **STAINED** glass windows.

#### **Psg: 2-GLOVE**

Gloves are **CLOTHING WORN ON** the **HANDS**.  
The **WORD "GLOVE" MEANS** "palm of the hand".  
**CRUDE GLOVES** were **WORN** by **PRIMITIVE MAN**.  
Greeks wore **WORKING** gloves to **PROTECT** their hands.  
The **ROMANS USED** gloves as a sign of **RANK**.  
Knights used to fasten gloves to their helmets.  
The gloves **SHOWED** their **DEVOTION** to their **LADIES**.  
A glove thrown on the **GROUND SIGNALLED** a challenge.  
Knights threw them at their enemy's feet.  
**FIGHTING STARTED WHEN** the enemy picked up the glove.

## **Test Passage Pair 2 (Umbrella/Giraffe)**

### **Psg: 3-UMBRELLA**

The **NAME** "umbrella" means small shadow.

Umbrellas **WERE** first used in **ANCIENT** Egypt.

**THEY GAVE** protection **FROM** the fierce **SUNSHINE**.

**SLAVES** held **UMBRELLAS** over their **MASTERS**.

In Egypt today, many people **CARRY** umbrellas.

In **EARLY** Rome, **ONLY WOMEN** used umbrellas.

**IF** a **MAN** did, he **WAS CONSIDERED** sissy.

Umbrellas were **USED** by both **SEXES** in **ENGLAND**.

**TODAY**, people use umbrellas to keep **OUT** the **RAIN**.

Umbrellas **USED** as sunshades are called parasols.

### **Psg: 4-GIRAFFE**

The giraffe is the tallest wild **ANIMAL**.

It is three times taller than a man.

A full grown giraffe is eighteen **FEET** high.

The giraffe has an extremely **LONG NECK**.

The neck **HAS ONLY** seven **NECKBONES**.

The **GIRAFFE'S BODY** is about the **SIZE** of a **HORSE'S**.

The **BODY** is **SHAPED LIKE** a triangle.

Africa is the only **COUNTRY WHERE** giraffes **LIVE WILD**.

**LARGE GROUPS** of them are **FOUND ON** the **PLAINS**.

They live there with **LIONS** and **ELEPHANTS**.

### ***Test Passage Pair 3 (Lung/Dove)***

#### **Psg: 5-LUNG**

The lungs are the **ORGANS** of breathing.

They **LIE** in the **CENTER** of the chest.

The heart lies **BETWEEN** the lungs.

The two lungs **ARE SURROUNDED** by the **RIBS**.

**BOTH ARE JOINED** together by the **WINDPIPE**.

This airway **EXTENDS FROM** the mouth and **NOSE**.

The lungs **CONTAIN SEVERAL MILLION AIR** cells.

**BLOOD** is pumped **THROUGH** the lungs by the **HEART**.

**OXYGEN** is carried to the **CELLS THIS WAY**.

#### **Psg: 6-DOVE**

A dove is a small, **TRIM BIRD**.

The **BEST** known is the **MOURNING** dove.

The mourning **DOVE** lives in **NORTH** America.

Its **NAME COMES** from its **SAD MATING** call.

It is sometimes **INCORRECTLY CALLED TURTLEDOVE**.

The mourning dove is about a **FOOT LONG**.

Its **BODY** is **BROWN** with **GRAY** wings.

It **FEEDS** on **GRAINS**, grasses and **WEEDS**.

The mourning dove is a **CARELESS HOUSEKEEPER**.

Its **NEST** is just some **STICKS** tossed together.



**Test Passage Pair 4 (Carrot/Grass)**

**Psg: 7-CARROT**

A carrot is a **VEGETABLE RELATED** to parsley.

The **LONG** stem of the carrot **GROWS UNDERGROUND**.

It is **THIS STEM** that most people **EAT**.

The **LEAVES** of the **CARROT** are also eaten.

They are often used to **FLAVOR** foods.

Spring **CROPS** are **GROWN** in the western **STATES**.

The crop is **HARVESTED** in one **HUNDRED** days.

Fall crops **ARE GROWN** in the **NORTHERN STATES**.

Winter **HARVESTS** usually come from **CALIFORNIA**.

**WINTER** crops are also **GROWN** in **TEXAS**.

**Psg: 8-GRASS**

Grass **CAN GROW** in all climates.

**THERE** are many forms of grasses.

**MANY GRASSES** are important food **SOURCES**.

Some grasses **GROW** higher than a **MAN'S HEAD**.

**AMONG THESE** are bamboo and sugar cane.

Other types are **ONLY** a **FEW INCHES TALL**.

Some grasses **ARE AS SLENDER** as threads.

Others are stiff enough to **STAND** a heavy **SNOW**.

**MOST** grasses are **FLOWERING PLANTS**.

These flowers bloom **MAINLY** in the **SPRING**.

## ***Test Passage Pair 5 (Nail/Woodpecker)***

### **Psg: 9-NAIL**

Nails are used to **FASTEN WOOD TOGETHER**.

Pioneers **USED WOODEN** pegs **INSTEAD** of nails.

One **END** of a nail is quite **POINTED**.

The **POINT** creates an **OPENING** for the **NAIL**.

It also helps **KEEP** the **WOOD** from **SPLITTING**.

At the nail's **OTHER** end is a **HEAD**.

It provides a **STRIKING SURFACE** for the hammer.

It also **COVERS** the nail **HOLE** in the wood.

There is a **SPECIAL NAIL** for every **PURPOSE**.

For **MOST** purposes a **ROUND** nail will do.

### **Psg: 10-WOODPECKER**

The woodpecker is a bird with a **STRONG BEAK**.

It bores **HOLES** in **TREES** looking for **INSECTS**.

Woodpeckers **LIVE** in all parts of the world.

The **TOES** of woodpeckers **ARE VERY UNUSUAL**.

Two **POINT FORWARD** and two face **BACKWARD**.

This allows the **BIRD** to cling to **TREES**.

The **TAIL FEATHERS** of a woodpecker are **STIFF**.

**THEY** can **USE** their tails as a **SUPPORT**.

They also use their tails to grasp **TREES**.

Woodpeckers **HAVE** long **TONGUES** with pointed **TIPS**.

**Test Passage Pair 6 (Owl/Vegetable)**

**Psg: 11-OWL**

Owls **HUNT** alone at **NIGHT** for food.

**THESE BIRDS** kill and **EAT** small **ANIMALS**.

They are **BIRDS** of prey, like **EAGLES**.

**OWLS** defend our **GARDENS** by eating **MICE**.

They are **CLOSELY** related to night **HAWKS**.

There are five **HUNDRED** different **KINDS** of owls.

They live throughout **COLD** and **TROPICAL** climates.

Owls **USUALLY** live **ALONE** in the **FOREST**.

**SOMETIMES** they exist on remote **SEA** islands.

Owls are **KNOWN FOR** their **SOLEMN** expression.

**Psg: 12-VEGETABLE**

The **WORD** "vegetable" **HAS** several **MEANINGS**.

It is **USED** in the phrase "vegetable **KINGDOM**".

This **REFERS** to the entire plant **WORLD**.

**SOME WILD** vegetables can be eaten.

Vegetables **COME** from the **LEAVES** and **FLOWERS** of plants.

Some vegetables come **FROM** a plant's **ROOTS**.

Vegetables can be **EATEN** raw or **COOKED**.

The **BEST** way to **COOK** vegetables is by **STEAMING**.

**THEY** are **USUALLY** chopped or **MASHED** before eaten.

Vegetables are **VERY DIFFERENT FROM** fruits.

## ***Test Passage Pair 7 (Lemon/Violin)***

### **Psg: 13-LEMON**

A **LEMON** is an oval, yellow citrus **FRUIT**.

It **GROWS** in Southern California and **FLORIDA**.

Lemon trees are **MEDIUM** sized, **WITH SPREADING BRANCHES**.

They have **PALE GREEN LEAVES** and large flowers.

The flowers are **WHITE**, with **PURPLE UNDERNEATH**.

The lemon **FLOWER** smells sweet.

**SOME** types of lemons have **NO** seeds.

**OTHER** types have **MANY** seeds.

Their **FRUIT** is a **SPECIAL TYPE** of **CITRUS**.

It usually has a **SOUR TASTE**.

### **Psg: 14-VIOLIN**

The violin is the best **KNOWN** stringed **INSTRUMENT**.

**EARLY VIOLINS** did not produce clear tones.

These violins were **VERY ROUGH SOUNDING**.

**LATER** violin **MAKERS** improved their craft.

Their **VIOLINS** were **EXTREMELY** well made.

The **VIOLIN BECAME** an **INSTRUMENT** for beautiful **MUSIC**.

Only **SMALL CHANGES** have occurred in violin **DESIGN**.

Violins must be **MADE** with **GREAT** care.

The **WOOD USED** greatly influences the tone.

The parts **MUST** be glued **TOGETHER** by **HAND**.

**Test Passage Pair 8 (Wheat/Ice)**

**Psg: 15-WHEAT**

Wheat is a **CHIEF SOURCE** of food.

**MILLIONS** of **PEOPLE** **DEPEND** on wheat **PRODUCTS**.

It is the most **WIDELY** used human **FOOD**.

Americans **PRIZE** wheat **MORE HIGHLY** than **OTHER** grains.

Wheat is **GROWN** on the **PLAINS** of the United States.

More wheat is **PRODUCED** there than **RICE**.

However, rice is **CHEAPER** to **PRODUCE**.

It **CAN** be **PLANTED** and **HARVESTED** by **HAND**.

Rice is **IMPORTANT** to **OVERPOPULATED** countries.

It is their **PRIMARY** source of nutrition.

**Psg: 16-ICE**

Ice forms when **WATER REACHES** the freezing **POINT**.

This point **OCCURS** at thirty-two degrees.

Lower **TEMPERATURES** are needed to freeze impure **WATER**.

**SNOWFLAKES** and **FROST** are forms of **ICE**.

Large bodies of water **FREEZE** very **SLOWLY**.

**MOVING** water takes **EVEN LONGER** to freeze.

It **TAKES DAYS** for ice to form on a **LAKE**.

It **TAKES** weeks for **RIVERS** to freeze.

Ice can also **FORM** on **ROADS** and **SIDEWALKS**.

This **CAN** make **TRAVELING** very **DANGEROUS**.

## ***Test Passage Pair 9 (Donkey/Guitar)***

### **Psg: 17-DONKEY**

Donkeys are **SMALLER**, sturdier relatives of **HORSES**.

The **WILD** donkey is **SHAPED** like a **ZEBRA**.

It is four **FEET** high at the **SHOULDERS**.

The donkey's **COAT** is **GRAY** and black.

It **HAS** a **DARK LINE** along its **BACK**.

This **ANIMAL** is **EXTREMELY INTELLIGENT**.

**SURPRISINGLY**, it is also a **SWIFT RUNNER**.

Man has **TAMED** donkeys for his personal use.

Donkeys are **OFTEN** used as **BEASTS** of burden.

All donkeys are **NOTED** for their **HUGE EARS**.

### **Psg: 18-GUITAR**

The guitar is a stringed **MUSICAL INSTRUMENT**.

Guitars are used to **ACCOMPANY SINGING**.

They are played in **GROUPS** with other **INSTRUMENTS**.

A **POPULAR** style of guitar **HAS** a flat top.

It is made of wood and **HAS** six **STRINGS**.

You **TUNE** a guitar **BY** comparing **OCTAVE NOTES**.

The **FINGERBOARD** is **HELD** with the **LEFT** hand.

The **MUSICIAN'S** right hand **PULLS** the strings.

He plays **BASS NOTES** with his **RIGHT** thumb.

**OTHER** notes are **PLAYED** with the first **THREE** fingers.

## ***Test Passage Pair 10 (Envelope/Grasshopper)***

### **Psg: 19-ENVELOPE**

An **ENVELOPE** is a **POUCH CONTAINING** a letter.

The **ADDRESS** is **WRITTEN** on the outside.

Envelopes **MAY** be used to **PROTECT IMPORTANT** documents.

**EACH** envelope is a **FOLDED** sheet of **PAPER**.

One flap is **COVERED** with **GLUE**.

The **ENVELOPE** is **GLUED** shut before mailing.

Self sealing envelopes use a **SPECIAL GUM**.

**THEY NEED** not be **MOISTENED** to stick shut.

Envelopes were **FIRST MADE** in eighteen **THIRTY** nine.

**BEFORE** that time, **LETTERS** were simply folded.

### **Psg: 20-GRASSHOPPER**

"**GRASSHOPPER**" refers to **TWO** types of **BUGS**.

They **HAVE** long, **THIN** back legs.

Grasshoppers leap **THROUGH** fields and meadows.

They can **JUMP** many times their own **LENGTH**.

A man could never jump **THAT FAR**.

Grasshoppers include all the **INSECTS CALLED** locusts.

The **DIFFERENCE BETWEEN** the **TWO** is **THEIR** feelers.

Locusts **HAVE** much shorter **FEELERS** than **GRASSHOPPERS**.

Grasshoppers are **MORE GREEN** in **COLOR** than **LOCUSTS**.

Locusts **ARE USUALLY** brown colored.

## ***Test Passage Pair 11 (Lettuce/Dictionary)***

### **Psg: 21-LETTUCE**

Lettuce is a **GREEN VEGETABLE** with **CRISP** leaves.

It is used to **MAKE** healthy **SALADS**.

It **GROWS** in the northern **HALF** of the **WORLD**.

There are **LOOSE** leaf and **HEAD** lettuces.

Loose **LEAF** lettuce is **POPULAR** in home gardens.

This **VARIETY** is found **MORE** often in **EUROPE**.

Its **LEAVES CURL LOOSELY** inside one another.

Most lettuce **GROWN** in America is **HEAD** lettuce.

Its **LEAVES FOLD** tightly **OVER** one another.

The leaves form a **BALL CALLED** a head.

### **Psg: 22-DICTIONARY**

A dictionary **LISTS** the meanings of words.

**IT LETS** a **PERSON DEFINE** a word quickly.

A dictionary **CONTAINS** over six **HUNDRED** thousand words.

**MOST** educated **ADULTS** know **ABOUT TEN** thousand words.

A **FIFTH** grade child **KNOWS** two **THOUSAND** words.

Adults and children **NEED** to use dictionaries.

**DICTIONARIES TELL** us many **USEFUL** things about words.

Every **DICTIONARY SHOWS** the **CORRECT** spelling of a **WORD**.

It also **SHOWS** how a word is **PRONOUNCED**.

**CREATIVE** writing would be difficult without dictionaries.



**Test Passage Pair 12 (Lawn/Cactus)**

**Psg: 23-LAWN**

A lawn is an **AREA** planted **WITH** grass.

**GREEN**, trimmed lawns are a beautiful **SIGHT**.

People **LIKE** to plant lawns around their **HOMES**.

Hospitals **OFTEN HAVE** lawns **AROUND** them.

**MOST** public **BUILDINGS** have **LAWNS**.

Lawns **HELP** to keep **SOIL** from eroding.

A **GOOD** lawn is **VERY** thickly **PLANTED**.

There are **FOUR** hundred plants **PER** square **FOOT**.

**EACH** plant has several **BLADES** of grass.

There are several **DIFFERENT KINDS** of **GRASSES**.

**Psg: 24-CACTUS**

The cactus is a plant with **SHARP** thorns.

Five **HUNDRED DIFFERENT** kinds grow in **MEXICO**.

**NEARLY** all cactus **PLANTS LIVE** in America.

Cactus **LIVE** best **WHERE** there is little **RAINFALL**.

**MOST CACTUS** is found in the **DESERT** southwest.

**PLANTS** usually make food in their **LEAVES**.

The cactus does **NOT** have any **LEAVES**.

They **HAVE DISAPPEARED** so the cactus can stay moist.

The cactus stores the **WATER IN** its **STEM**.

**DESERT** cactus **FLOWERS BLOOM** in the spring.

## ***Test Passage Pair 13 (Cabbage/Gold)***

### **Psg: 25-CABBAGE**

Cabbage is the **MOST COMMON** garden **VEGETABLE**.

It has **THICK LEAVES** which curl inward.

They form a **ROUND HEAD** eight inches **ACROSS**.

The **WORD** cabbage is Latin for "**HEAD**".

The **CABBAGE** plant can live through **SEVERAL FREEZES**.

It also **GROWS** in the heat of **SUMMER**.

**EARLY SPRING** cabbage is **PLANTED** in greenhouses.

This protects the **YOUNG PLANTS FROM FROST**.

**AFTER** six **WEEKS** they may be moved outdoors.

**TRANSPLANTING** is done before the end of spring.

### **Psg: 26-GOLD**

Gold was one of the first known **METALS**.

For **MANY YEARS** gold has **SYMBOLIZED WEALTH**.

**EVEN** the early cave man knew **ABOUT** gold.

**ANCIENT EGYPTIANS** hammered gold into **LEAVES**.

They used these leaves to **DECORATE** their **TOMBS**.

A **SCIENCE** grew up around efforts to make gold.

It **STARTED DURING** the **MIDDLE** ages.

The ancient scientists **NEVER ACHIEVED** their **GOAL**.

Modern **SCIENTISTS** have made these **DREAMS** come **TRUE**.

**THEY** now **MAKE** gold by a **CHEMICAL** process.

**Test Passage Pair 14 (Weed/Chimney)**

**Psg: 27-WEED**

Weeds are considered **WORTHLESS PLANTS**.

The **DIFFERENCE BETWEEN** weeds and useful **PLANTS** is unclear.

**WHERE** a **WEED GROWS** determines its usefulness.

**OATS GROWING** in a **CORNFIELD** are considered weeds.

Oats growing in an **OATFIELD** are useful **PLANTS**.

Much crop damage is **CAUSED BY** weeds.

Experts estimate it at **FIVE** dollars per person.

**FARMERS SPEND THOUSANDS** of **DOLLARS** for **WEED** sprays.

Chemicals used to **KILL** weeds can be harmful.

These chemicals are **SOMETIMES** found in **DRINKING WATER**.

**Psg: 28-CHIMNEY**

A chimney **CARRIES SMOKE** from a **FIREPLACE**.

It **ALSO SUPPLIES** the fire with **OXYGEN**.

Warm air is **LIGHTER** than **COLD** air.

Warm air **ABOVE** the fire **TENDS** to rise.

As the **WARM** air **RISES**, cold air rushes in.

A draft is **CREATED** in the **CHIMNEY**.

The draft **PROVIDES** the oxygen **NEEDED** for the **FIRE**.

Chimneys must **STAND HIGHER** than the **BUILDING**.

Otherwise, the chimney **WILL** not **DRAW PROPERLY**.

**CHIMNEYS** can **IMPROVE** the appearance of a home.

**Test Passage Pair 15 (Lead/Calendar)**

**Psg: 29-LEAD**

Lead is a **SOFT, HEAVY**, metallic element.

It is **OFTEN** combined with other **METALS**.

**MANY USEFUL OBJECTS** contain some lead **MIXTURE**.

The Romans **USED LEAD** for **WATER PIPES**.

Their **PUBLIC** baths were lined **WITH** lead.

The **WORD** "plumber" means a **WORKER** in lead.

Lead is **ONE** of the **HEAVIEST KNOWN** metals.

It is **ELEVEN** times as **HEAVY** as **WATER**.

The **EXPRESSION** "as **HEAVY** as lead" is common.

It **DESCRIBES** an object of great weight.

**Psg: 30-CALENDAR**

A calendar is a **SYSTEM** for **RECORDING TIME**.

All **CALENDARS INCLUDE** the day and the **YEAR**.

**THESE** are two **NATURAL DIVISIONS** of time.

Both are based **ON** the **EARTH** and the **SUN**.

The **MONTH** depends on the **APPEARANCE** of the **MOON**.

The week **IS** an **ARTIFICIAL** division of **TIME**.

**WEEKS** are not **BASED** on observable **EVENTS**.

The calendar was a **GREAT HUMAN** achievement.

**THROUGH** it, men learned to measure **TIME**.

## **Test Passage Pair 16 (Lion/Zebra)**

### **Psg: 31-LION**

The lion is a **WILD MEMBER** of the cat **FAMILY**.  
**IT** is related to the tiger and the **BOBCAT**.  
The lion and **TIGER** are the largest **CATS**.  
The **TIGER** is the **FIERCEST** of all.  
The lion is a strong, **WILD CREATURE**.  
It **HAS** a large, **HEAVY** and powerful **BODY**.  
**ITS** long **MANE** gives it a proud appearance.  
The lion is **KNOWN** as the "**KING** of **BEASTS**".  
Lions are also **CALLED** "**LORDS** of the Jungle".  
**HOWEVER**, they are **SELDOM FOUND** in the **JUNGLE**.

### **Psg: 32-ZEBRA**

A zebra is an animal that **LIVES** in Africa.  
It is a wild, **GRASS** eating **ANIMAL**.  
It **LOOKS VERY** much like a **HORSE**.  
**MOST** zebras **STAND** four to five **FEET** high.  
The zebra has a **SURPRISINGLY** different **COLOR** pattern.  
Zebras **HAVE PARALLEL** black and **WHITE STRIPES**.  
The stripes are arranged in **EXACT DESIGNS**.  
These stripes **RUN** all **OVER** their **BODIES**.  
They even run **UP** and **DOWN THEIR** faces.  
The stripes **ALSO** appear on the zebra's **EARS**.

**Test Passage Pair 17 (Lizard/Wolf)**

**Psg: 33-LIZARD**

The **LIZARDS ARE** the **CLOSEST RELATIVES** of **SNAKES**.

**SOME** lizards look **LIKE** snakes with **LEGS**.

Some **LARGE** ones look like **CROCODILES**.

They come in a **VARIETY** of **SHAPES** and **COLORS**.

Lizards have **MANY WAYS** of moving and fighting.

**LIZARDS** and **SALAMANDERS** are often **CONFUSED**.

They **LOOK** very much **ALIKE BUT** aren't related.

Up **NORTH** there are few lizards but **MANY** salamanders.

In the **SOUTHWEST**, just the **OPPOSITE** is true.

**Psg: 34-WOLF**

The wolf **IS** a **MEMBER** of the **DOG** family.

A wolf **LOOKS** like a **SKINNY** wild **DOG**.

It has a **WIDE HEAD** and pointed **NOSE**.

Wolves **LIVE** in North **AMERICA**, Europe, and Asia.

Wolves **USED** to **LIVE** all over the United **STATES**.

**GRAY** wolves are **SELDOM SEEN** nowadays.

**THEY** live in the Rockies and **NORTHERN** states.

Wolves **HUNT** in packs and **MATE** for **LIFE**.

The average wolf pack consists of **TEN** wolves.

A female wolf gives **BIRTH** every other **YEAR**.

**Test Passage Pair 18 (Orange/Oyster)**

**Psg: 35-ORANGE**

The orange is the most important **CITRUS FRUIT**.

It is a **GOOD** source of **VITAMIN C**.

It **CAN BE** eaten **OR** made **INTO** juice.

Eating oranges **MAY PREVENT** the common **COLD**.

There are **TWO** different kinds of oranges.

The sweet orange is **EATEN** in the United States.

It is **THOUGHT** to have **COME FROM CHINA**.

The other **KIND** of orange is **MORE** bitter.

It **IS** used often in **COOKING**.

The **TANGERINE** is often **INCORRECTLY CALLED** an **ORANGE**.

**Psg: 36-OYSTER**

Oysters are animals that live in **SEA** shells.

The oyster lives in many **PARTS** of the **WORLD**.

It **LIVES MOSTLY** in quiet, shallow **WATERS**.

It **IS MAN'S** most **VALUABLE SEAFOOD**.

The oyster's **SHELL** forms a **SHELTER**.

The **SHELL** is divided into two halves.

They are **FASTENED TOGETHER** at **ONE END**.

The left **HALF** is larger and **THICKER**.

**A MUSCLE ATTACHES** the soft **BODY** to the **SHELL**.

This muscle **HELPS** the **OYSTER** open the shell.

## ***Test Passage Pair 19 (Dice/Eagle)***

### **Psg: 37-DICE**

**DICE** are cubes **USED** in games of chance.

They may be **MADE** of ivory, wood, **OR PLASTIC**.

A **SINGLE** such **CUBE** is **CALLED** a die.

Each **SIDE** of a **DIE** has **ONE** to six dots.

**DOTS** on **OPPOSITE SIDES** add up to **SEVEN**.

Players **TOSS** the dice on a flat **SURFACE**.

The **NUMBERS** that come up **DECIDE** the game.

The **COMBINATION** of numbers **DEPENDS** on chance.

A **GAME** of dice is **THEREFORE** a gamble.

Gambling is not legal in **MOST STATES**.

### **Psg: 38-EAGLE**

The eagle is a large bird of **PREY**.

It has powerful **WINGS** and **SHARP** eyes.

The **EAGLE** is a **SYMBOL** of courage and freedom.

The **BALD** eagle is America's **NATIONAL BIRD**.

**THERE** are **SEVERAL** different kinds of eagles.

Each **TYPE IS** very **DIFFERENT** in **SIZE** and color.

Eagles **HAVE** strong beaks and **POWERFUL CLAWS**.

The eagle's **BEAK** is as long as its **HEAD**.

The beak's upper **HALF** hooks over the **LOWER**.

The eagle **USES** its **POWERFUL** beak to **CATCH** its **PREY**.



**Test Passage Pair 20 (Ear/Liver)**

**Psg: 39-EAR**

The ear is an important **SENSE ORGAN**.

The ear **HAS** two main **PURPOSES**.

It lets **MAN HEAR** and **MAINTAIN** his balance.

**GOOD** hearing permits **PEOPLE** to understand **SPEECH**.

Through speech, we **EXCHANGE** ideas and **OPINIONS**.

**HEARING ALSO** makes man **AWARE** of **DANGER**.

The ear's **BALANCE** mechanism helps us walk **UPRIGHT**.

**DAMAGE** to this section causes **STAGGERING**.

The **PERSON** also **GETS** disoriented and **DIZZY**.

This kind of dizziness is **CALLED VERTIGO**.

**Psg: 40-LIVER**

The liver is a very important **INTERNAL** organ.

Its **MAIN FUNCTION** is to filter the **BLOOD**.

The liver is the **LARGEST** organ in **MAN**.

It can **WEIGH** three to four **POUNDS**.

The liver is **DARK RED** or **CHOCOLATE** colored.

It is **LOCATED** in the **MIDDLE SECTION** of the **BODY**.

It **FITS** closely to the intestines and kidneys.

It is **POSSIBLE** to **TRANSPLANT** a liver.

This **ADVANCED** operation is **VERY** expensive.

**HOWEVER**, it is **RESPONSIBLE** for **SAVING MANY LIVES**.

**Test Passage Pair 21 (Leopard/Eye)**

**Psg: 41-LEOPARD**

The leopard is a **MEMBER** of the **CAT** family.

It is the **THIRD** largest cat in the **WORLD**.

**ONLY** the **LION** and tiger are **LARGER**.

Leopards live in the **JUNGLES** of Africa.

They are **EXCELLENT** night time **HUNTERS**.

**LEOPARDS STAND ALMOST** two feet high at the **SHOULDERS**.

A big **MALE MAY MEASURE** nine **FEET LONG**.

It **CAN WEIGH** one hundred and sixty pounds.

A large **FEMALE** will weigh **ONLY** seventy pounds.

**LEOPARDS** have only a few **CUBS** in a litter.

**Psg: 42-EYE**

The eye is a most **IMPORTANT SENSE** organ.

We **USE** it to **VIEW** the **WORLD**.

**ALMOST EVERY ACTIVITY INVOLVES** the eyes.

**EYES** are **OUR** windows to the **WORLD**.

The **LENS** of the eye collects **LIGHT**.

The **LIGHT** is **FOCUSED INSIDE** the eye.

This information is sent to the **BRAIN**.

The brain then begins to **PROCESS** the **IMAGE**.

Eyes help us to enjoy **BOOKS** and **PAINTINGS**.

We **SEE** beauty in **MOUNTAINS** and **SUNSETS**.

## **Test Passage Pair 22 (Zipper/Egg)**

### **Psg: 43-ZIPPER**

A zipper is any kind of **SLIDE FASTENER**.

**ALL** zippers **HAVE** two rows of **TEETH**.

The two **EDGES** of the zipper fasten **TOGETHER**.

The **TEETH HOLD** the zipper **TOGETHER**.

The edges **STAY** fastened **TILL** they are **RELEASED**.

They are released **BY DRAWING** the slide back.

Slide zippers are **OFTEN** used to **FASTEN CLOTHING**.

They **ARE USED** on **LUGGAGE** and briefcases.

The **FIRST** zipper was invented by an **AMERICAN**.

It **WAS** made of connected **HOOKS** and eyes.

### **Psg: 44-EGG**

Many kinds of animals and **BIRDS PRODUCE** eggs.

The **MAIN PURPOSE** of eggs is to breed **YOUNG**.

Most young **ANIMALS BEGIN** as an **EGG**.

**PEOPLE** usually think of the egg as a **FOOD**.

Actually, **FEW** kinds of eggs are **EATEN**.

Bird's eggs are **LARGER** than **MAMMAL'S**.

Their eggs **CONTAIN FOOD** for the young **BIRD**.

Young birds **DEVELOP OUTSIDE** the mother's **BODY**.

The ostrich **EGG** is the **LARGEST** type.

The **HUMAN EGG** is **ONE** of the smallest.

**Test Passage Pair 23 (Clock/Kangaroo)**

**Psg: 44-CLOCK**

Clocks are **INSTRUMENTS** that can **MEASURE** time.

They **DIVIDE** days into regular **INTERVALS**.

Originally, **TREE SHADOWS** were **USED** to mark time.

The **SHORTEST** shadows **OCCUR** around midday.

**LONGER** shadows occur in morning and **LATE AFTERNOON**.

The **FIRST** clock invented was the **SUNDIAL**.

**LATER**, the water clock was **DEVELOPED** in **CHINA**.

It could **MEASURE** time on **CLOUDY** days.

**WATER** clocks were used for several **THOUSAND YEARS**.

**EARLY GREEKS** and Romans **ALSO** used clocks.

**Psg: 46-KANGAROO**

The kangaroo **CARRIES** its **YOUNG** in a **POUCH**.

The pouch is **LOCATED** outside of the **ABDOMEN**.

**ANIMALS** with **POUCHES** are not found in **AMERICA**.

The kangaroo's **NATIVE COUNTRY** is **AUSTRALIA**.

There are many different kinds of **KANGAROOS**.

The **SMALLEST ARE** the same size as a **RABBIT**.

The largest **ARE NEARLY** seven feet tall.

Their back **LEGS** are larger than their **FRONT** legs.

Kangaroo fossils have **RECENTLY BEEN FOUND**.

Prehistoric kangaroos **GREW** to **BE** very **LARGE**.

**Test Passage Pair 24 (Camel/Goose)**

**Psg: 47-CAMEL**

The camel is a very **UGLY** animal.

It is also **ONE** of the most **USEFUL**.

It has **BEEN** man's **SERVANT** for **MANY CENTURIES**.

Camels were **ONCE** a measure of **WEALTH**.

In the **BIBLE**, God gave camels to **ABRAHAM**.

Camels are called the "**SHIP** of the desert".

They **CAN** endure long, **HARD** desert **JOURNEYS**.

Camels can **TRAVEL** many **MILES** without **NEEDING** water.

**WITHOUT** the camel, man **COULDN'T TRAVEL** the **DESERTS**.

Camel **CARAVANS** are **STILL** seen in the **SAHARA**.

**Psg: 48-GOOSE**

The goose is a **WEB FOOTED BIRD**.

It **IS CLOSELY RELATED TO** the **DUCK**.

A goose is larger than a **DUCK**.

Its **NECK** is slightly **LONGER** than a duck's.

There are forty different varieties of **GEESE**.

Seventeen kinds of wild **GEESE** live in **AMERICA**.

**GEESE ARE KNOWN** to **MOVE WITH** the seasons.

They **FLY NORTH** in summer and south in **WINTER**.

Some fly as far north as the **ARCTIC**.

**OTHERS** fly as far south as **MEXICO**.

## TEXT FOR CST PRACTICE PASSAGES

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## *Practice Passages*

### **Psg: 1-LAKE--Practice Passage**

Lakes are **BODIES** of water **SURROUNDED** by **LAND**.

They are **LOCATED** in **EVERY** large **COUNTRY**.

Some lakes are **FOUND** at **EXTREMELY** high altitudes.

Others are many feet **BELOW SEA** level.

**MOUNTAIN** lakes were **FORMED** by glaciers.

The **WORD** lake **MEANS** a large pond or **HOLE**.

The Caspian **SEA** is **REALLY** a lake.

**SOME** other well **KNOWN** seas are also lakes.

Lakes affect the weather for **MANY MILES AROUND**.

**PEOPLE USE** lakes for **RECREATION** and industry.

### **Psg: 2-KNIFE--Practice Passage**

The knife is a very **HELPFUL UTENSIL**.

It was a **TOOL** developed by the **CAVE** man.

He **SHARPENED** pieces of **STONE** to **MAKE** knives.

The knives were **USED** for **SKINNING** and **CUTTING** meat.

The knife **ALSO SERVES** as a **WEAPON**.

**MANY** different knives are used in **INDUSTRY** today.

**DIFFERENT** knives are used for **VARIOUS TASKS**.

The knife has **BEEN** used to **CREATE ARTWORK**.

**ARTISTS** use **KNIVES** to paint pictures.

These knives **CREATE** wide **SPLASHES** of color.

### Psg: 3-CROW--Practice Passage

Crows are commonly **SEEN WILD** birds.

They are **KNOWN** for their **UNUSUAL CALL**.

Crows are found all over the world.

**CROWS LIVE** in meadows and **ORCHARDS**.

**THEY** are large **BIRDS** with **BLACK** feathers.

**DURING FLIGHT**, the **FEATHERS** look **GREEN**.

Their powerful beak has a **SHARP POINT**.

The **BEAK** is **SURROUNDED** by **FEATHERS**.

The crow's feet are **ADAPTED** for **WALKING**.

**FEMALES** are **SLIGHTLY** smaller than **MALES**.

### Psg: 4-KITE-Practice Passage

A kite is **FLOWN** at the **END** of a string.

It is made of paper on a **LIGHT FRAME**.

Kites **MAY** be **SHAPED** like **DRAGONS** or birds.

The **KITE** was **INVENTED** two thousand years **AGO**.

**HISTORIANS THINK** the kite was invented in **GREECE**.

The Chinese **CLAIM** that they **INVENTED** the kite.

They **ARGUE** that it was used in **WARS**.

In **CHINA** a day is set **ASIDE** as **KITE'S** day.

Kite's day **FALLS** on the **SEVENTH** of **JULY**.

Thousands of **CHINESE FLY** kites on that day.



### **Psg: 5-GLUE--Practice Passage**

Glue is a sticky material made from **ANIMALS**.  
It comes from their **SKIN**, bones, and **TISSUES**.  
The **THREE TYPES** of glue are forms of **GELATIN**.  
They are **BONE**, **FISH**, and hide glue.  
Glue **IS USED** to join different **MATERIALS TOGETHER**.  
These materials include **WOOD**, paper, and **CLOTH**.  
Bone glue is **MADE** by a **STEAM** process.  
**FIRST**, grease is removed **FROM** the **BONES**.  
A **SOLUTION** is used to **DISSOLVE** the **GREASE**.  
The **CLEAN** bones are **BOILED** to **FORM** glue.

### **Psg: 6-DOOR--Practice Passage**

**PEOPLE ENTER ROOMS** through doors.  
A **DOOR** is also **USED** to **COVER** an entrance.  
A door may be **HUNG** on **HINGES**.  
It **MAY SLIDE** back and forth in a groove.  
There **ARE DOORS** that are **DIVIDED** into two parts.  
The **COMMON** name for this is a "dutch door".  
The **UPPER** half **OPENS** while the lower **STAYS** closed.  
**THESE** are **POPULAR** doors in **EUROPEAN** homes.  
The **DESIGN** provides **SECURITY** for the homeowner.  
It lets him **SEE** out, without **LETTING ANYONE** in.

### **Psg: 7-GRAPe--Practice Passage**

The **GRAPe** is a fruit that **GROWs** on a vine.

**PEOPLE** have grown grapes throughout **HISTORY**.

They are **MENTIONED** in **ANCIENT** myths.

**GRAPES** are **FOUND** all over the **WORLD**.

They are **EATEN**, and made **INTO WINE**.

They are also **MADE** into grape **JUICE**.

**DRIED** grapes are called **RAISINS**.

Grape **VINES** are grown **TO** provide shade.

**THREE THOUSAND KINDS** of grapes **EXIST**.

**ONE THOUSAND** of **THEM** started in America.

### **Psg: 8-LIME-Practice Passage**

Limes are **CLOSELY** related to the lemon.

They **TASTE** more **SOUR THAN** the lemon.

Lime **SKIN** is **THICKER** than the **LEMON'S**.

Limes **GROW** on **SMALL CITRUS** trees.

These trees **GROW** in **MORE** tropical **AREAS**.

The **MAJORITY** of limes are **PRODUCED** in Florida.

Lime trees **GROW** to be **TEN** feet **TALL**.

Limes are **PRINCIPALLY** used for making **JUICE**.

Lime juice is used to **FLAVOR MANY DRINKS**.

It is also used as a **COOKING SPICE**.

# TEXT FOR CST LEARNING PASSAGES

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## ***Learning Passages***

### **Psg: 1-WATCH--Learning Passage**

Watches help us get to places on time.

A **WATCH** is **REALLY** a **PORTABLE CLOCK**.

A **CENTURY** ago watches were **VERY EXPENSIVE**.

Now, a **RELIABLE WATCH CAN** be **BOUGHT CHEAPLY**.

Watches are **NOW INEXPENSIVE ENOUGH** for **CHILDREN**.

Watches **CARRIED** by railroad **ENGINEERS** are very **ACCURATE**.

They make sure that trains run on time.

The **EARLY** watches were **LARGE** and **HEAVY**.

The first watch was **INVENTED** in the sixteenth **CENTURY**.

It was invented by a German **LOCKSMITH**.

### **Psg: 2-NOSE-Learning Passage**

The nose is **USED FOR BREATHING** and **SMELLING**.

The nose and **LUNGS** have the **SAME** main **FUNCTION**.

**AIR** enters **THROUGH TWO OPENINGS** in the **NOSE**.

These are separated by a thin **BONY WALL**.

The air continues **FROM** the nose into the throat.

It **THEN** carries **OXYGEN** down to the **LUNGS**.

The nose also **ALLOWS** the detection of **ODORS**.

The sense of smell is **CRITICAL** to **ANIMALS**.

They **USE** it to identify **THEIR ENEMIES**.

### **Psg: 3-LEAVES--Learning Passage**

Leaves are admired for their **BEAUTIFUL SHAPES**.  
Their colors are brilliant in the **FALL**.  
The **LEAF'S GREATEST** gift to mankind is **FOOD**.  
Green **LEAVES** are **IMPORTANT** food **PRODUCERS**.  
**PEOPLE WOULD STARVE** without leaves.  
Their **FOOD** is **MANUFACTURED CONSTANTLY**.  
An **INVISIBLE** process **GOES** on **INSIDE** every leaf.  
Leaves **TRAP ENERGY** from **LIGHT** entering the plant.  
The foods **PRODUCED** are **CALLED CARBOHYDRATES**.  
**CARBOHYDRATES** are passed on to plant-eating animals.

### **Psg: 4-COTTON-Learning Passage**

Cotton is the most important **SOURCE** of clothing.  
Three out of four **PEOPLE** wear cotton clothing.  
**COTTON** does **HAVE** many **USES BESIDES** clothing.  
It is a chief source of many **CHEMICALS**.  
It is **ALSO** used **IN BUILDING** materials.  
The cottonseed is rich in **OIL** and **MINERALS**.  
It **ALSO** gives **FOOD** for **MEN** and **ANIMALS**.  
**MILLIONS** of people **DEPEND** on money from **COTTON**.  
**FARMER'S INCOMES DEPEND** on the **PRICE** of **COTTON**.  
Cotton production can be important to economic **GROWTH**.

### **Psg: 5-DUCK--Learning Passage**

Ducks are **WEB FOOTED BIRDS**.

They live **ALONG** lakes, streams, and **RIVERS**.

Seventy different **KINDS** of ducks **LIVE** in America.

Geese and **SWANS** are **RELATED** to **DUCKS**.

There **ARE** wild ducks and **DOMESTIC** ducks.

Wild ducks are prized by hunters.

When **COOKED CORRECTLY**, they **ARE DELICIOUS** to **EAT**.

Ducks **HAVE** large heads, and slender **NECKS**.

Their **FLAT** bills have tiny **TEETH**.

The **BILLS ARE** used to **CATCH FOOD**.

### **Psg: 6-WATER-Learning Passage**

Water is **EXTREMELY** important in our **LIVES**.

Only **AIR** is **MORE IMPORTANT** than water.

Our **BODIES** are **PRIMARILY MADE** up of water.

**WITHOUT** water, people and **ANIMALS** would **DIE**.

Water **IS NOT** always easy to get.

Early **PIONEERS** had to **SEARCH** for water.

**HOMESTEADS** could not be **BUILT** without a **WELL**.

**BATTLES** have been **FOUGHT** for the possession of water.

**LACK** of water can **CAUSE** widespread **SUFFERING**.

Without water for **CROPS**, people may **STARVE**.

### **Psg: 7-ONION--Learning Passage**

Onions **BELONG** to the **LILY** family.

They have a **STRONG TASTE** and **DISTINCT** odor.

The **ODOR** is due to a **POWERFUL** oil.

**DURING** peeling, the oil **FORMS** a vapor.

The vapor affects **SENSITIVE NERVES** in the **EYES**.

That is **WHY** people **CHOPPING** onions **CRY**.

Onions **FIRST** grew in **CHINA**.

**THEY** were **RAISED** in America by the pioneers.

Onions are **MOSTLY GROWN** in **CALIFORNIA** and Texas.

They are **ALSO** grown in **COLORADO** and New **YORK**.

### **Psg: 8-OAK-Learning Passage**

The oak is a symbol of great **STRENGTH**.

There are **TWO** hundred **DIFFERENT** kinds of oaks.

Oaks grow in **MANY DIFFERENT LANDS**.

In Asia they grow **WESTWARD** from China.

They **GROW** in **EUROPE** from Sicily to **SWEDEN**.

They **ARE EXTREMELY** common in **NORTH AMERICA**.

The **ACORN SETS** the oak apart from other **TREES**.

The acorn **IS** the fruit of the **OAK TREE**.

It is surrounded by a **HARD SHELL**.

**SQUIRRELS COLLECT** acorns for their winter food **SUPPLY**.

### **Psg: 9-DIAMOND-Learning Passage**

A **DIAMOND** is the **HARDEST** substance **KNOWN**.

It is also **ONE** of the most **VALUABLE**.

It is the most **WANTED** of all **PRECIOUS** stones.

The **DIAMOND** is the **JEWEL** for engagement rings.

It is the **MOST LASTING** of all **GEM** stones.

Diamonds are **ALSO** used for **CUTTING** and **GRINDING**.

Diamonds are **MADE** of **ALMOST PURE CARBON**.

**MOST** diamonds have **EIGHT** sides.

**OTHERS** are **SHAPED** like a cube.

Some diamonds **EVEN** have **TWELVE** sides.

### **Psg: 10-LEG-Learning Passage**

The legs are **LONG LIMBS** of the body.

They **EXTEND DOWNWARD** from the **TRUNK** to the **FEET**.

Legs are **USED** for **BODY** support and **MOVEMENT**.

Each leg **CONSISTS** of three **LONG BONES**.

**THESE** bones are surrounded by **MUSCLE** and **TISSUE**.

One leg **SECTION** is **CALLED** the **THIGH**.

The thighbone is the **LONGEST BONE** in the body.

The calf **SECTION** is **BETWEEN** the knee and **ANKLE**.

It **CONTAINS** the other **TWO** bones.



### **Psg: 11-ELM--Learning Passage**

The elm is a **BEAUTIFUL**, large **SHADE** tree.

**ELM** trees are **COMMON** in **EUROPE** and **NORTH** America.

**THEY** have **BEEN KNOWN** to flourish in **AUSTRALIA**.

**SOME** elms are **SHAPED** like a **TALL** vase.

**OTHERS** take the **FORM** of an **UMBRELLA**.

Elm trees can **BECOME ONE** hundred feet **TALL**.

**SOME** elm **TREES** live for **TWO** hundred **YEARS**.

The elm's small **FLOWERS** appear in the **SPRING**.

### **Psg: 12-GORILLA--Learning Passage**

The gorilla is the **LARGEST** of the **PRIMATES**.

It is the ape **THAT** most resembles **MAN**.

It is **ALSO** the rarest of the **APES**.

The gorilla lives in the **FORESTS** of **AFRICA**.

A gorilla is **USUALLY LARGER** than a man.

It is **NEARLY** six **FEET** tall standing **UPRIGHT**.

It **COULD EASILY** tear a man **APART**.

The gorilla is **COVERED** with coarse **BROWN HAIR**.

The gorilla's hair **BECOMES GRAY** with age.

Gorillas **SPEND MOST** days **HUNTING** for **FOOD**.

### **Psg: 13-DANDELION-Learning Passage**

The dandelion is a yellow **WILD FLOWER**.

It grows **EVERYWHERE** in the **SPRING**.

Dandelions **GROWING** on **LAWNS** are **CONSIDERED** weeds.

The dandelion **GROWS ALL** over the **WORLD**.

**THEY** were **BROUGHT** to **AMERICA** by the early **SETTLERS**.

The name dandelion **MEANS** "lion's tooth".

The **NAME COMES** from the notches on the **LEAVES**.

The dandelion **HAS** a **GOLDEN YELLOW** head.

The **HEAD** is made of **MANY** flowers.

The **HOLLOW STEM** is filled with juice.

### **Psg: 14-DINOSAUR--Learning Passage**

Dinosaurs **LIVED** millions of years ago.

These primitive creatures **RULED THEIR** world.

The **WORD "DINOSAUR" MEANS "TERRIBLE LIZARD"**.

The **NAME REFERRED** to **THEIR** tremendous **SIZE**.

**MOST** dinosaurs were **QUITE HARMLESS**.

Dinosaurs are divided into **TWO** main groups.

Some dinosaurs **ATE PLANTS**, while others ate meat.

These two groups were not **CLOSELY RELATED**.

However, they were **DESCENDED FROM** the **SAME ANCESTORS**.

The dinosaurs **DISAPPEARED** many years ago.

### **Psg:15-OCEAN--Learning Passage**

**OCEANS** cover the surface of **OUR PLANET**.

Ocean tides are **DETERMINED** by the full moon.

The power of the **OCEAN** is amazing.

It can be beautiful when it is **CALM**.

In **THESE MOMENTS** the ocean is like glass.

However, during a **STORM** it **CAN** be terrifying.

**SOME WAVES** are taller than an average **BUILDING**.

The **OCEAN** is a **LARGE** and **LONELY PLACE**.

You **CAN SAIL** for days **WITHOUT SEEING PEOPLE**.

Lifeboats **HAVE FLOATED** for months **WITHOUT** being found.

### **Psg: 16-KIDNEY-Learning Passage**

Kidneys are very **IMPORTANT** organs.

The **FUNCTION** of the **KIDNEYS** is to **CLEANSE** the **BLOOD**.

They **ACT** as a **FILTER** to **REMOVE WASTE**.

The **KIDNEYS** are located **IN** the back.

There is one on **EITHER** side of the **BACKBONE**.

They are **JUST BELOW** the eleventh **RIB**.

The kidneys are **ABOUT** four inches **LONG**.

These organs are **SHAPED** like large **BEANS**.

The **HOLLOW** side of the **BEAN** faces **INWARD**.



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